REMARKS

Claims 20 through 24 were previously withdrawn but have been formally cancelled herein. Accordingly, Claims 2-10, 12, 14-15, 17-19, 25, and 26 are currently pending. Reconsideration and allowance of the pending claims are respectfully requested.

Claim Rejections 35 USC § 103(a)

Claims 2-5, 6-10, 12, 14-15, 17-19, 25 and 26 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 5,790,195 ("Ohsawa") in view of U.S. Patent No. 6,100,940 ("Dieterich"). The Examiner asserts that it would have been obvious to one having ordinary skill in the art to incorporate the delayed video of Dieterich into the compression pre-processing apparatus of Ohsawa for delaying the video signal to improve a subsequent coding of the incoming or pre-recorded image sequence and reducing the computation of an encoder.

With due respect, the Examiner has misconstrued the references and not established a *prima facie* case of obviousness in the rejection of claims. First, the combination of Ohsawa and Dieterich does not teach or suggest all the claim limitations. Second, there is no motivation to combine Dieterich and Ohsawa. Third, the combination of Dieterich and Ohsawa does not provide a reasonable expectation of success.

The Applicant and the Examiner continue to have different views of what Ohsawa teaches. Therefore, another review of what Ohsawa teaches is in order. In the Background of the Invention section, Ohsawa describes encoding methods for "a moving image." Ohsawa describes fixed rate control of coding or encoding where quantization varies and a prefilter is used to "eliminate . . . aliasing distortion." Col. 1, lines 8-35 of Ohsawa. "Beside fixed rate control," Ohsawa discloses a "variable rate method in which the quantization step in fixed and fluctuation of the code amount is allowed." *Id.* at lines 36-38. Ohsawa indicates that there are problems with both techniques and indicates that his invention provides "high compression while preventing a deterioration of picture quality." *Id.* at lines 63-35. When describing his invention, Ohsawa describes the prefilter circuit that executes a space filtering process and an analysis of the discussion in Ohsawa clearly shows that this prefilter circuit is, in essence, a variable filter, which unlike prior pre-filters can be adjusted. Col. 3,

lines 21-26 of Ohsawa. However, the overall function of the pre-filter circuit 10 remains the same as in the prior art – there is filtering before quantization. Of course, if a variable or adjustable filter is to be implemented, there must be some way to control the adjustment of that filter. So, Ohsawa uses activity detection circuit 11, motion magnitude detection circuit 12, and decision 13 to generate a control signal for the prefilter circuit 10. Ohsawa describes the creation of the control signal as follows:

> The activity detection circuit 11 checks the frequency component of the image in the frame **to be encoded**, calculates an (A) value indicative of a degree of activity, and supplies the (A) value to the decision circuit 13.
>
> The motion magnitude detection circuit 12 detects the motion vector every pixel block in a manner similar to the motion vector detection circuit 38 mentioned above, detects the number of blocks in which the magnitude of the vector is large, and supplies an (M) value indicative of the magnitude of the motion to the decision circuit 13.
>
> **The decision circuit 13** of the embodiment **determines a (K) value as a prefilter coefficient and a (Q) value to control** the quantization step by a fuzzy inference from the given activity and motion and supplies those values to the prefilter circuit 10 and selector 16, respectively.

Col. 4, lines 10-25 of Ohsawa (emphasis added). The output of the decision circuit 13 is not using coding decisions as claimed. The language of Ohsawa indicates that encoding is a future event ("checks the frequency of the component of the image in a frame **to be encoded**") (emphasis added). As noted in Applicant's specification, "coding decisions" are the decisions that the encoder made during encoding. They are not information that controls the encoder. Of course, Applicant's use of the term "coding decisions" is consistent with the ordinary meaning of the term "decision," which means a ruling, judgment, or determination that has been reached (not something that is yet to be determined). See, e.g., http://dictionary.reference.com/browse/decision.

In Ohsawa the decision circuit 13 generates signals that control the prefilter circuit 10 and, ultimately, the quantization circuit 33. However, the decision circuit 13 does not generate coding decisions, because no such decisions exist in the device shown in Ohsawa until a video signal is encoded in the variable length encoding circuit 34 and output from the code amount circuit 35. The Office's interpretation of Ohsawa is in direct contradiction to the explicit disclosure of the reference.

As the Applicant has also noted, Ohsawa does not disclose the presence of the claimed video pathway. There is no disclosure of an upstream process for taking coding decisions and a separate downstream encoder, separated by a video pathway that carries the input video and the representations of coding decisions to the downstream encoder. Ohsawa merely discloses a modification of prior art encoders where both pre-filtering and quantization are adjusted or controlled, but Ohsawa is not using decisions made during the encoding (which occurs in encoding circuit 34). The output of the decision circuit 13 is based on the raw, uncompressed signal as processed by the detection circuits 11 and 12.

Dieterich discloses an apparatus for pre-processing an image sequence that includes a delay 170. The delay 170 serves to hold or delay a portion of the image sequence so that a side information extractor 150 has sufficient time to deduce side information (e.g., the location of scene cuts, the complexity of a particular frame, the motion information for the frames) for the portion of the image sequence on a path 175 (see Fig. 1) that is being delayed. *Col. 3, lines 36-40.* The extracted side information is then inserted with the image sequence and then forwarded to the encoder 180. *Col 8, lines 42-44.* As a result, the encoder 180 receives a delayed video signal 175 and the signal from the side information extractor 150 concurrently, which is alleged to improve the coding completed by the encoder 180.

As should be apparent from the above, even if there was some motivation to combine the teachings of Ohsawa and Dietrich, the combination does not disclose the claimed subject matter. In other words, neither reference discloses taking decisions from the encoder and passing them along a video pathway with the raw, input video signal.

As to the existence of a motivation or suggestion to combine the reference, Applicant continues to disagree with the Office. There is no reason to incorporate the delay 170 from Dieterich into the compression pre-processing apparatus of Ohsawa. As described above, the delay 170 of Dieterich is included so that the image signal from the side information extractor 150 *and* the signal from the image source can be received by the downstream encoder 180 concurrently (i.e., the image is passed on two separate "paths" to the encoder 180). Ohsawa, alternatively, discloses only a single image path that includes a single encoding process (blocks 31-34). For example, the pre-processing apparatus (blocks 11, 12, and 13) is <u>not</u> an image path,

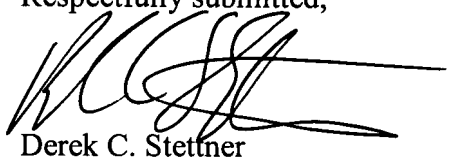
in that it does not return or output an image to the encoder 34. The only signals that are transmitted by the pre-processing apparatus of Ohsawa (e.g., the decision circuit 13) are the filter coefficient control signal 13a (e.g., a "K" value) and a fuzzy interference signal (e.g., a "Q" value), neither of which include information from the original image signal. Therefore, the only image path present in the Ohsawa reference consists of the components 31, 32, 33, and 34. As such, it would be unreasonable to combine Dieterich and Ohsawa, because Dieterich discloses two image paths input images to an encoder 180, while Ohsawa discloses a single image path.

Additionally, even if there was some suggestion or motivation to combine Dieterich and Ohsawa, the combination does not produce an apparatus with a reasonable expectation of success. The delay 170 of Dieterich could not be incorporated into the compression pre-processing apparatus of Ohsawa (the "pre-processing apparatus" including the activity detection circuit 11, the motion magnitude circuit 12, and the decision circuit 13), because Ohsawa includes only a single image path that sequentially encodes the image. Adding a delay into the pre-processing apparatus of Ohsawa would not improve any processing of a downstream encoder. The only result of adding a delay would be a slowing of the sequential processing completed by blocks 31-34. Therefore, the combination of Dieterich and Ohsawa does not produce an apparatus that includes a delay to reduce the computation of an encoder, as suggested by the Examiner.

CONCLUSION

In light of the above, Applicant respectfully requests reconsideration and allowance of the pending claims. As noted above, Applicant also requests that the Examiner telephone the Applicant's attorney to schedule a telephone interview before issuing an action on the merits.

Respectfully submitted,



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